From USGS Tuesday afternoon, 11 August

The following information was provided by the USGS Southwest Regional Office:

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Monitoring is being conducted by several agencies including Utah Division of Water Quality (UDWQ), the USGS Utah Water Science Center and others. Reclamation and others received this update Sunday afternoon on UDWQ's sampling plans:

* We have a crew at the stateline with a pH meter waiting for the plume. We estimate that the plume will arrive between 3:00pm and midnight tonight (assuming a travel time from Kirtland of 1.4 of 3 mph).

* We plan to take metals samples and pH readings at the state line at 12:00, 3:00 pm, 6:00 pm, and 9:00 pm today.

* We will transport these samples to SLC early tomorrow for analysis either at a private lab or our state lab and expect to have data to report by Tuesday.

* We have sondes in the river measuring continuous pH at Montezuma, Sand Island, and Mexican Hat (map attached). We were not able to deploy a continuous instrument at the stateline site.

* Beginning tomorrow we will collect water column samples at all four sites once in the morning and again in the afternoon. We will continue this sampling regime until Friday unless there is reason to cut it short or go longer.

* Two of our samplers are at Shiprock talking with USGS now. They report that the leading edge is either 2 or 15 miles downstream of Shiprock. pH readings at Shiprock are 8.09. It appears that the plume is buffered and we don't expect to see a pH signal when it enters Utah. Depending on which report is correct and the travel rate, we expect it arrive at the border as early as 3:00 pm but more likely not until early tomorrow morning.

* We think it is unlikely that they will be able to visually see the plume when it arrives.The river is very turbid due to rains and our crew does not think they will be able to visually see the plume when it arrives. They describe the river now as red, turbid, and consistency of a smoothie.

They have a website set up now that is being updated as information comes in. Here's the link:

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http://www.deq.utah.gov/Topics/Water/goldkingmine/index.htm

I also contacted Cory Angeroth the Chief of the Surveillance Section with the USGS Utah Water Science Center and here's what he sent about their sampling plans on the lower San Juan R. and Lake Powell:

Scott: we are planning on collecting samples in the San Juan arm of lake Powell on Aug 23 as part of Dave Naftz mercury project. We will also collect some samples at the bluff Gage once we determine the timing of arrival. Will let you know when and what we plan to do. Cory

Preliminary information from other sources is suggesting that the early biological indicators in the Animas R. are generally good. Time will tell if this holds for the long term.

http://www.mountainstudies.org/news//early-signs-good-for-animas-river-biology

http://www.hcn.org/articles/when-our-river-turned-orange-animas-river-spill

A couple other things to note. The revised estimate of 3 million gallons spilled equals about 401,000 cubic feet. While this is definitely a lot of toxic waste and will likely have lasting effects on the Animas River, it only equals just under 4 minutes of the total flow of the San Juan R. as of Monday morning at Farmington (1700 cfs; in response to a request from EPA, Reclamation increased releases at Navajo Dam from about 675 cfs to about 1,300 cfs from August 7-10, its now back to 650 cfs). It also equals 9.2 acre feet and Lake Powell's volume is currently around 13 million acre feet. The dilution factor in the river and especially the reservoir are going to make it more and more difficult to detect this spill and its contents the further downstream you go.